DC Circuits

Name: _____ Section: 4BL-____ Date performed: __/__/__

Lab station: _____ Partners: _____

Circuit box #_____

Equivalent resistance

Measurements (include units and uncertainties):

<u>Circuit diagrams</u>

R_1 = _____ ± _____   (range:)

R_2 = _____ ± _____   (range:)

R_3 = _____ ± _____   (range:)

R_{ser} = _____ ± _____   (range:)

R_{par} = _____ ± _____   (range:)

R_{cmb} = _____ ± _____   (range:)

Calculated equivalent resistances:

<u>Discrepency tests</u>

R_{ser} = _____ ± _____

R_{par} = _____ ± _____

R_{cmb} = _____ ± _____

Show all calculations, including full uncertainty calculations:

Internal resistance

Draw the circuit diagram (include the switch):

R ( ) (range)	V ( ) (range)	I ( )	R ( ) (range)	V ( ) (range)	I ( )
( )	( )		( )	( )	
( )	( )		( )	( )	
( )	( )		( )	( )	
( )	( )		( )	( )	
( )	( )		( )	( )	
( )	( )		( )	( )	

Attach V vs. I graph from Excel.

$$\text{slope} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}} \qquad \text{(from linest)}$$

$$y\text{-intercept} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}} \qquad \text{(from linest)}$$

$$x\text{-intercept} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}} \qquad \text{(calculated)}$$

$$V_{\text{oc}} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}}$$

$$I_{\text{sc}} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}}$$

$$R_{\text{int}} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}}$$

$$R_{\text{lim}} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}} \qquad \text{(range:} \qquad \text{)}$$

$$R_{\text{bat}} \; = \; \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}}$$